

Abstract of the Disclosure

Operations in a cell for electrolytic production of aluminum are controlled by establishing a standard rate of addition of aluminum fluoride to a molten electrolyte covered by a crust; establishing a target temperature for a duct carrying offgas from a chamber containing the molten electrolyte; measuring an actual temperature in the duct; and, in response to the actual temperature measurement in the duct, performing at least one of (1) when the actual temperature is greater than the target temperature, inspecting the crust for a crust hole and then repairing any observed crust hole, and (2) varying an actual rate of addition of aluminum fluoride to the electrolyte by increasing the actual rate above the standard rate when the actual temperature is greater than the target temperature and by reducing the actual rate below the standard rate when the actual temperature is less than the target temperature. Controlling operations in accordance with the invention improves cell energy efficiency.